

Issue Brief: Workplace Injuries in Hotel Housekeeping in California

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Date: 5/13/2016

Background

A workplace injury is any injury involving an event or exposure in the work environment that either caused or worsened the original harm. Examples of workplace injuries include repetitive motion injuries (e.g., from computer activities), injuries from lifting heavy objects, and bodily harm as a result of falling or slipping while at work.

The trends in workplace injuries among Housekeepers in the Accommodation (Hotel) Industry include a steady increase in musculoskeletal (MSD) injuries, often caused by workers falling, slipping, and tripping in the workplace. Housekeeping involves cleaning and maintaining hotel spaces, such as guest rooms, kitchens, and balconies. The tasks include routinely cleaning rooms and floors, transporting linen carts, disposing of trash, and lifting furniture.

Using California Workers' Compensation Information System (WCIS) data, this brief discusses recent trends in injury claims among Housekeepers and factors correlated to these injuries, such as job tenure, the nature of injuries, source of injuries and event of injuries. The findings will help develop a plan of action with regard to preventive measures aimed at improving worker safety and reducing exposure to workplace hazards.

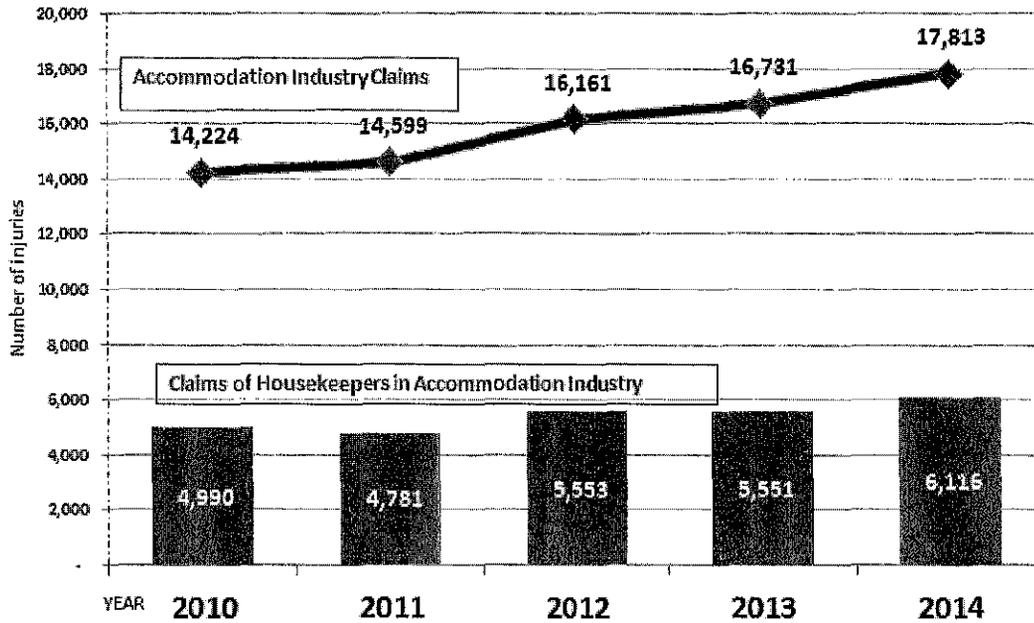
Overview of Workplace Injuries in Hotel Housekeeping

As shown in Figure 1, claims of injury in hotel housekeeping are steadily increasing, specifically musculoskeletal injuries, which affect the muscles, nerves, and supporting structures of the human body. From 2010 to 2014, the number of injury claims by Housekeepers in the Accommodation Industry increased on average 897 more claims each year. This large increase shows that workers continue to face risks of injury in the workplace.

According to WCIS data, the main preventable cause of injury for hotel Housekeepers is "falls, slips, and trips," which contribute to 20.5% of the injuries in this occupation. These injuries are most likely to occur within the first six months of employment, meaning that new workers are the most affected.

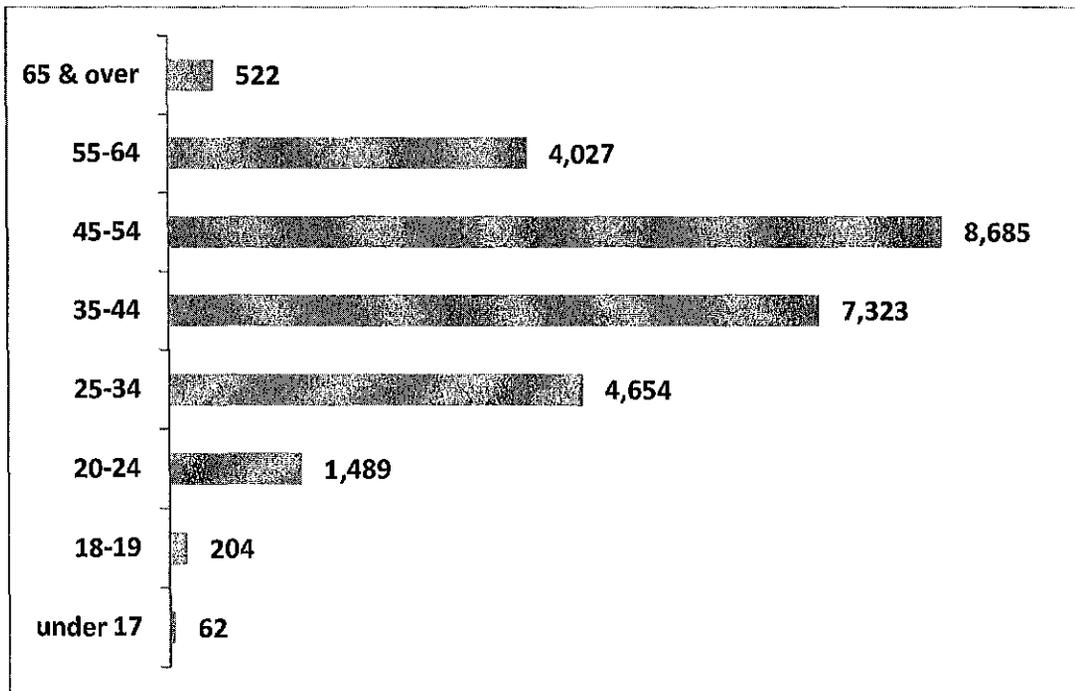
The age group most likely to be injured is those age 45-54, which was comprised of 8,685 injured workers in hotel housekeeping. Figure 2 shows a breakdown by age group, indicating a gradual increase in the number of injuries as worker age rises, but a sharp decrease in the number of workers injured between the ages of 55 and 64.

Figure 1. Workplace Injury Claims by Hotel Housekeepers in California, 2010-2014



Note: These are injuries reported to WCIS with industry codes filled as NAICS=721110, 721120, 721191, 721199 and 721310 or SIC=7011, 7021 and 7041, or class code=9050 with run date Nov 24, 2015. Housekeepers are found with occupation description like "Housekeeper", "Room Attendant", "Room Keeper", "Maid" etc. See appendix for the codes.

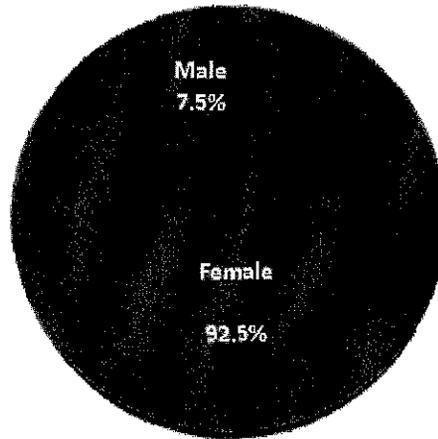
Figure 2. Number of Injured Hotel Housekeepers by Age in California, 2010-2014



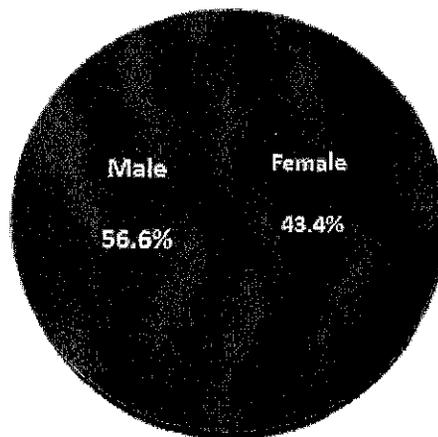
Sources: Both figures show data on injuries reported to the WCIS with the NAICS industry codes 721110, 721120, 721191, 721199, and 721310; SIC codes 7011, 7021, and 7041; or class code 9050, from a search dated November 24, 2015.

Figure 3 shows that 92.5% of the hotel Housekeepers injured are female. The percentage of injured workers in the general industry is not very comparable, however, with an almost even amount of claims by both male and female.

Figure 3. Injured Hotel Housekeepers in California by Sex



Injured Workers in the General Industry by Sex in California



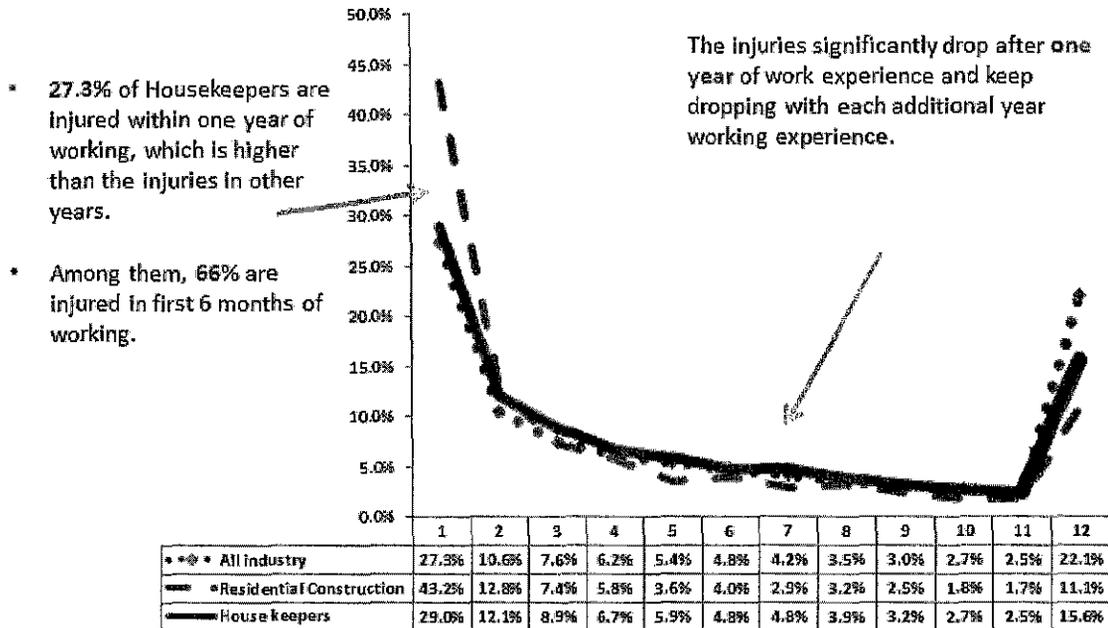
Workplace Injuries in Relation to Tenure on the Job

Workplace injury in this industry occurs most frequently within the first year of employment, as in other industries and occupations. The workplace injuries among Housekeepers decreases with each additional year of job tenure.

Figure 4 notes the trend per year of the tenure of an employee in housekeeping with a comparison of all industries and specifically with residential construction workers. This is calculated using the following formula:

$$\text{Years} = (\text{Date of Injury} - \text{Date of employed})/365$$

Figure 4. Tenure of Employee at the Time of Injury in California, 2010-2014



Note: These are injuries reported to WCIS with industry codes filled as NAICS=721110, 721120, 721191, 721199 and 721310 or SIC=7011, 7021 and 7041, or class code=9050 with run date Nov 24, 2015.

Workplace Injuries Classified According to the Cause of Injury

Table 1 shows the top 10 causes of injuries for hotel housekeepers. Three of the top 10 causes contribute to the major cause category of Falls, Slips and Trips and include: Fall on same level, Fall, Slip, Trip not otherwise classified, and Fall From Liquid or Grease Spills. The average tenure of workers with injuries involving repetitive motion is 7.5 years, which indicates when workers are vulnerable to this kind of injury. For the remaining causes of injury, the average tenure when injured is consistently around five years.

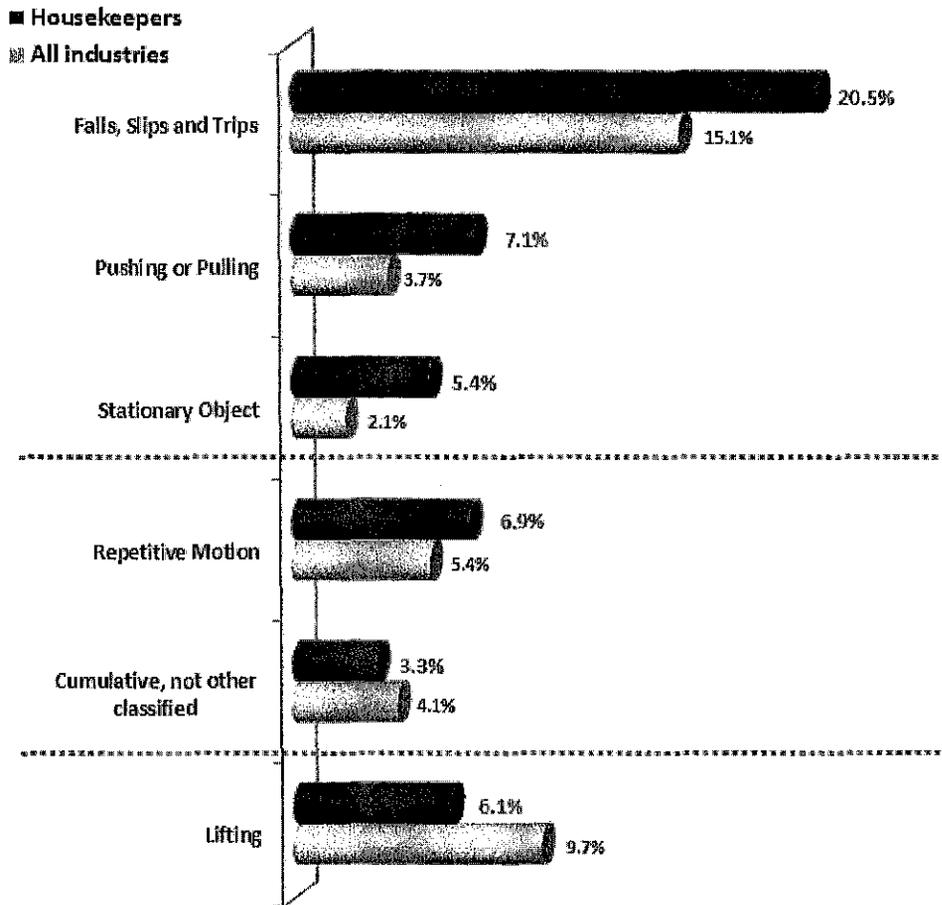
Table 1. Top 10 Detailed Causes of Injuries for Hotel Housekeepers by Job Tenure in California

Cause of injury, description	Number of Injuries	% of Total Injuries	Average Age when Injured	Average Tenure (Years Injured)
Strain or Injury by, NOC	2,669	9.9%	43	5.8
On Same Level	2,009	7.4%	46	6.2
Pushing or Pulling	1,925	7.1%	43	5.4
Repetitive Motion	1,863	6.9%	45	7.5
Other Miscellaneous, NOC	1,787	6.6%	43	5.5
Lifting	1,648	6.1%	42	5.2
Stationary Object	1,447	5.4%	44	5.5
Fall, Slip, Trip, NOC	1,261	4.7%	44	5.6
Cumulative, NOC	884	3.3%	44	5.9
From Liquid or Grease Spills	867	3.2%	42	4.8

Sources: Figure 4 and Table 1 use data on injuries reported to WCIS with NAICS industry codes 721110, 721120, 721191, 721199, and 721310; SIC codes 7011, 7021, and 7041; or class code 9050, from a search dated November 24, 2015.

Figure 5 provides a comparison of major causes of injuries between Hotel Housekeepers and All Industries. Hotel Housekeepers report a significantly higher percentage than all other industries and occupations for injuries caused by Falls, Slips and Trips (20.5% vs 15.1%), Pushing or Pulling (7.1% vs 3.7%), and Stationary Objects (5.4% vs 2.1%). Repetitive motion injuries are only 1.5% more frequent among Hotel Housekeepers than among workers in all industries. Cumulative injuries that are not otherwise classified are reported .8% less in housekeeping than in all industries. Injuries from lifting comprise a smaller percentage of major causes of injuries for those in hotel housekeeping than those in all industries at 3.6% less than all industries.

Figure 5. Major Causes of Injuries for Hotel Housekeepers vs. All Industries in California



Sources: Injuries listed here were reported to WCIS with NAICS industry codes 721110, 721120, 721191, 721199, and 721310; SIC code 7011, 7021, and 7041; or class code 9050, from a search dated November 24, 2015.

Table 1A references the percentage of the sub-categories of 'Falls, Slips and Trips'. The risk of falling at the same level, 7.4%, is much higher in hotel work than in industry overall, 4.3%. Liquid and grease spills are 1.9% higher for Hotel Housekeepers than for all other industries.

Table 1A. Percentage of Sub-Categories of Falls, Slips and Trips of All Injuries

Sub-categories of Falls, Slips and Trips	Hotel Housekeepers	All Industries
On same level	7.4%	4.3%
Fall, Slip, Trip, not otherwise classified	4.7%	4.8%
From liquid or grease spills	3.2%	1.3%
On stairs	1.9%	1.0%
From different level	1.2%	1.6%
Slip or trip, did not fall	1.3%	0.8%
Other types of fall	0.8%	1.3%
Total % of all Falls, Slips and Trips	20.5%	15.1%

Note: WCIS data. Run date 4/25/2016.

Table 2 provides the nature of the injury among housekeeping employees as a percentage of total injuries in Hotel Housekeeping. Strain- or tear-related injuries are more common among Housekeepers (34.7%) than among workers in all industries and occupations (30.7%). Laceration injuries are less prevalent in housekeeping (5.8%) than in all industries and occupations (10.0%). The percentage shares for the remaining injury categories in Hotel Housekeeping are comparable to the percentages for workers in all industries combined. Cumulative injuries are a similar reported for Hotel Housekeepers and for all industries and occupations at 3.9% and 4.1%, respectively.

Table 2. Nature of Injuries among Hotel Housekeepers Compared with All Industries and Occupations in California

Nature of Injury	Hotel Housekeepers		All industries and occupations
	Number of Injuries	% of total injuries	% of total injuries
Strain or Tear	9349	34.7%	30.7%
Contusion	3791	14.1%	11.3%
All Other Specific Injuries, not otherwise classified	2562	9.5%	8.4%
Sprain or Tear	2500	9.3%	10.4%
Laceration	1559	5.8%	10.0%
Puncture	1322	4.9%	3.3%
Inflammation	1138	4.2%	2.8%
All Other Cumulative Injuries	1046	3.9%	4.1%
Multiple Physical Injuries Only	856	3.2%	3.3%
Foreign Body	476	1.8%	2.1%

Sources: Injuries listed here were reported to WCIS with NAICS industry codes 721110, 721120, 721191, 721199, and 721310; SIC codes 7011, 7021 and 7041; or class code 9050, from a search dated November 24, 2015.

Table 3 itemizes the body parts and percentage of total injuries that affected that part. The area most affected is the lower back; 14.5% of Housekeeper injuries and 12.2% of injuries in all other industries are lower-back injuries. The area least affected is the eyes, whether in housekeeping or all other industries. Remaining categories have similar percentage shares of total injuries in housekeeping and other industries.

Table 3. Body Part Injured in Housekeeping vs. Other Industries and Occupations in California

House keepers			All industries & occupations
Body part	N of injuries	% of total injuries	% of total injuries
Low Back Area (Lumbar and Lumbo-Sacral)	3,901	14.5%	12.2%
Multiple Body Parts (incl. Body Systems and Body Parts)	2,693	10.0%	10.4%
Finger(s)	2,314	8.6%	8.0%
Knee	1,956	7.2%	6.7%
Shoulder(s)	1,865	6.9%	5.8%
Hand (excl. Wrist and Fingers)	1,716	6.4%	5.9%
Wrist	1,277	4.7%	4.2%
Ankle	942	3.5%	3.4%
Eye(s)	871	3.2%	3.3%

Sources: Injuries listed here were reported to WCIS with NAICS industry codes 721110, 721120, 721191, 721199, and 721310; SIC code 7011, 7021, and 7041; or class code 9050, from a search dated November 24, 2015.

Workplace Injuries Classified According to Musculoskeletal Type

A musculoskeletal disorder (MSD) injury is one involving an acute injury or cumulative trauma of the muscle, tendon, ligament, bursa, peripheral nerve, joint, bone, or blood vessel.

Potential sources of the risk of injury for Housekeepers are divided into the following as well as other categories:

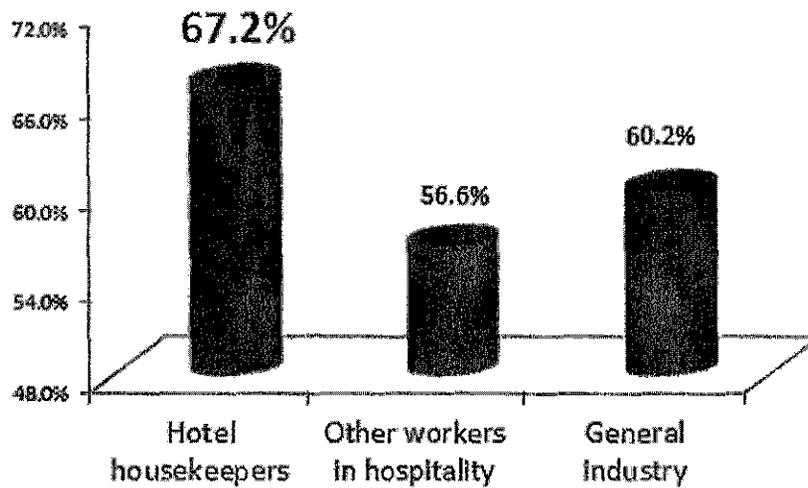
- slips, trips, and falls
- prolonged or awkward static postures
- extreme reaches and repetitive reaches above shoulder height
- lifting or forceful whole body or hand exertions
- torso bending, twisting, kneeling, and squatting
- pushing and pulling
- falling and striking objects
- pressure points where a part of the body presses against an object or surface
- excessive work rate
- inadequate recovery time between housekeeping tasks

Appendix 3 shows the two conditions that must be met in order for an injury to be considered an MSD injury.

MSD injuries comprise over half of all injuries for the period examined, as shown in Figure 6. From 2010-2014 Housekeepers have a significantly higher percentage of MSD injuries (67.2%) than

workers in general industry (60.2%) or even other hospitality workers in the accommodation industry (56.6%).

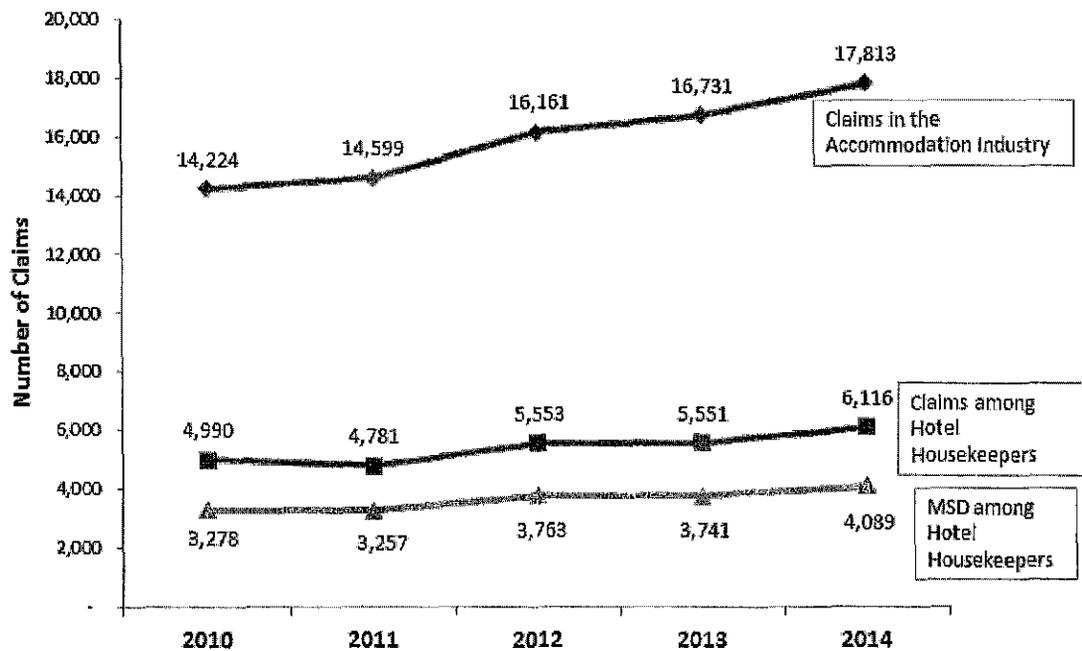
Figure 6. Average Percentage of MSD Injuries for 2010-2014 by Industry Grouping



Note: WCIS data. Run date 4/25/2016.

Figure 7 shows overall, claims for injuries in the accommodation industry, injuries of Hotel Housekeepers, and MSD injuries in Hotel Housekeepers increased from 2010 to 2014.

Figure 7. Number of Claims for MSD Injuries in Hotel Housekeeping in California, 2010-2014

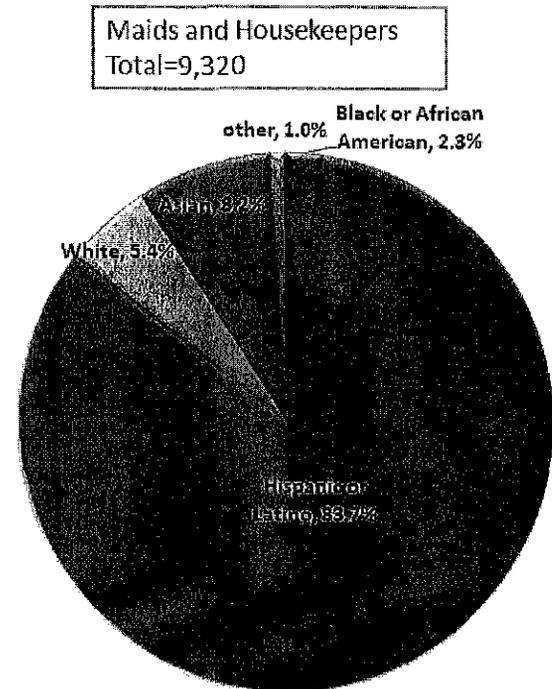
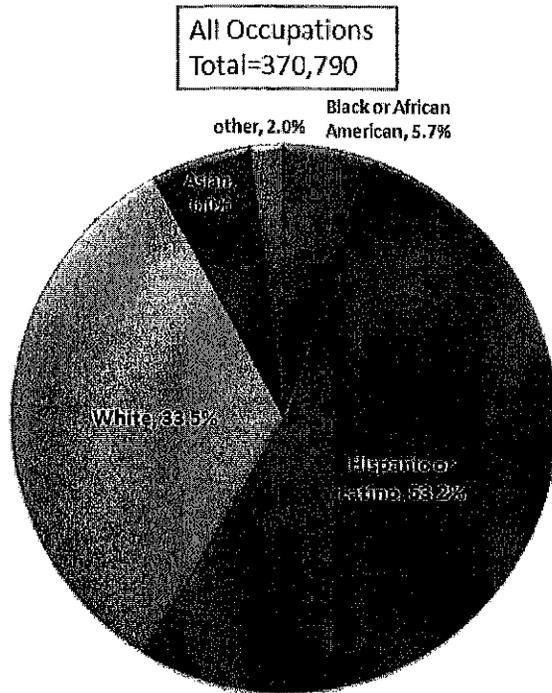


Source: WCIS Data Run 4/25/16.

Workplace Injuries Requiring Days Away from Work (DAFW)

Hispanic injured workers account for 53.2% of injuries that require days away from work (DAFW) in all occupations, and those who are Maids and Housekeepers make up 83.7% of those with DAFW injuries. White non-Hispanic injured workers account for 33.5% of DAFW injuries in all industries, and white Maids and Housekeepers comprise only 5.4%. See Figure 8.

Figure 8. Injuries Requiring Days Away from Work by Race or Ethnicity for California, 2010-2014



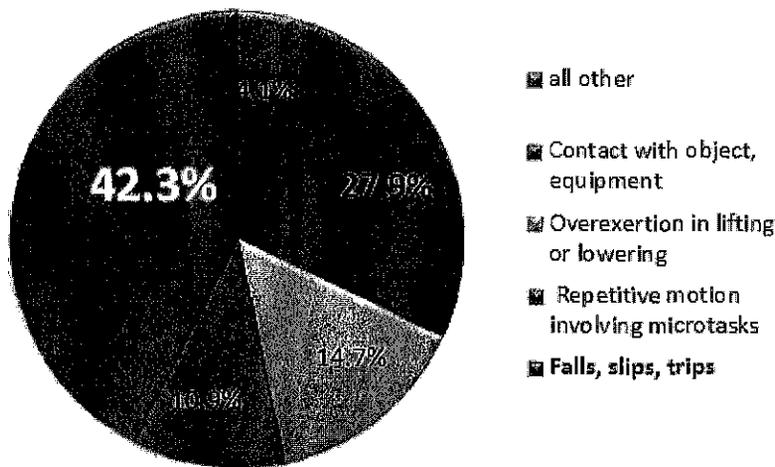
Source: Bureau of Labor Statistics, <http://www.bls.gov/data/>.

The BLS Survey of Injury and Illness (SOII) is a survey, due to statistical reliability, confidentiality or not enough data of the survey, the injuries of Housekeepers in accommodation only, excluding NAICS 721211 Recreational Vehicle(RV) Parks and Campgrounds and 721214 Recreational and Vacation Camps (except Campgrounds) for CA is not available.

The BLS data most closely related to hotel Housekeepers in CA are DAFW injuries of all maids and housekeeping cleaners (including those in all industries).

Figure 9 shows that “falls, slips, and trips” comprise the majority of DAFW injuries among Maids and Housekeepers. Repetitive motion DAFW injuries make up 10.9% of DAFW injuries among Maids and Housekeepers. Similar findings are found from causes of all claims from WCIS data.

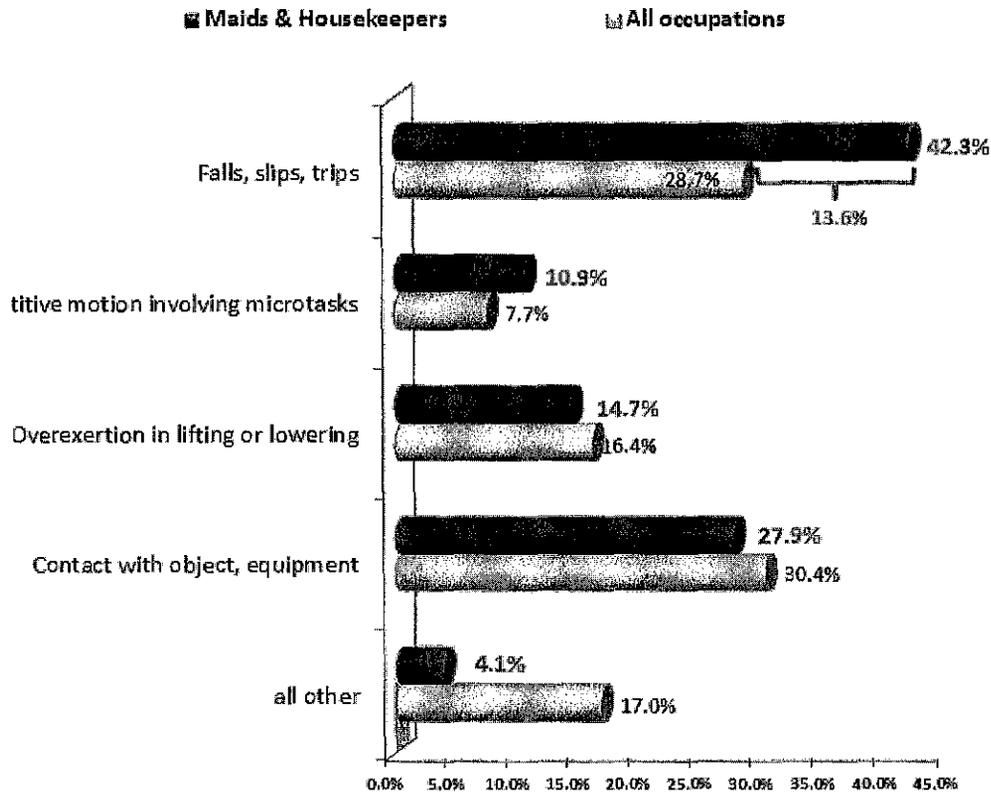
Figure 9. Causes of DAFW Injuries among Maids and Housekeepers, 2011-2014



Source: Bureau of Labor Statistics, <http://www.bls.gov/data/>.

Figure 10 shows a percentage comparison of DAFW injuries among Maids and Housekeepers relative to DAFW injuries for all occupations. One major difference is that Maids and Housekeepers show 42.3% of DAFW injuries attributable to “falls, slips, and trips,” which is 13.6% higher than the same figure for all occupations. Another finding is Maids and Housekeepers have a slightly higher percentage for reported repetitive motion injuries than all occupations. Maids and Housekeepers had only 4.1% of their DAFW injuries as a result of “all other” causes, while all other occupations in the Accommodation Industry had a much higher share at 17.0%. These findings are consistent with WCIS cause of injuries findings. Maids and Housekeepers have significantly higher falls, slips and trips (DAFW) injuries than all occupations.

Figure 10. Event or Exposure for All Occupations vs. Maids and Housekeepers, 2011-2014



Source: Bureau of Labor Statistics, <http://www.bls.gov/data/>.

Table 4. Primary Source of DAFW Injuries for Maids and Housekeepers vs. All Occupations

Primary source of injury	Maids and Housekeeping cleaners DAFW injuries		All occupations DAFW injuries
	Number of DAFW injuries	%	%
Chemical, chemical products	150	1.4%	1.1%
Containers	1,040	10.0%	11.8%
Furniture, fixtures	1,500	14.4%	4.9%
Machinery	200	1.9%	4.2%
Parts and materials	140	1.3%	7.5%
Person, injured or ill worker	3,140	30.1%	22.5%
Person, other than injured or ill workers	110	1.1%	8.3%
Floors, walkways, ground surfaces	1,710	16.4%	13.1%
Handtools	320	3.1%	4.2%
Ladder	100	1.0%	2.0%
Trucks	--	--	1.6%
Cart, dolly, hand truck - nonpowered	510	4.9%	1.3%
All other	1,500	14.4%	17.5%

Source: Bureau of Labor Statistics, <http://www.bls.gov/data/>.

* The primary source of a nonfatal occupational injury is the object, substance, person, bodily motion, or exposure that most directly led to, produced, or inflicted the injury or illness.

The largest gap between DAFW injuries among Maids and Housekeepers (14.4%) and those in all occupations (4.9%) involves injuries caused by furniture or fixtures (Table 4). For example, where the primary cause is "person, other than injured or ill workers," the percentage is higher in all occupations (8.3%) than it is for Maids and Housekeepers (1.1%). "Person, injured or ill workers", "floors, walkways, ground surfaces", and "cart, dolly, hand truck-non powered" are all 3%-4% greater for Hotel Housekeepers than for all occupations (DAFW) injuries.

Data Limitations

Compilation of the data was complicated by various limitations. Underreporting and misreporting of workplace injuries hinder easy identification of trends. No existing codes identify MSD in the WCIS, so the MSD definition developed by the Department of Safety and Health (DOSH) and DIR uses the indicated existing cause, nature, and body part of injuries.

Conclusions

The data available make clear that attention on workplace injury in hotel housekeeping is merited. The data results indicate a steady increase in injuries that affects all age groups. Findings suggest a need to address the related risk factors and support investment in areas to reverse the observed recent increase in injury rates. Accuracy of reporting will in turn improve the industry's ability to measure the effects of workplace injury in this sector and assess changes in hotel housekeeping over time.

References

Bureau of Labor Statistics, <http://www.bls.gov/data/>.
Division of Occupational Safety and Health (DOSH), <https://www.dir.ca.gov/dosh/doshreg/Hotel-Housekeeping.Discussion-Draft-for-2016-02-17.pdf>
Survey of Occupational Injuries and Illness (SOII), <http://www.bls.gov/respondents/iif/>.
Workers Compensation Information System (WCIS),
https://www.dir.ca.gov/dwc/wcis/WCIS_Reports.html.

Appendices

Appendix 1. DOSH and WCIS lodging establishment definition

DOSH definition of lodging establishment

"Lodging establishment" means an establishment that contains sleeping room accommodations that are rented or otherwise provided to the public, such as hotels, motels, resorts, and bed and breakfast inns. For the purposes of this section, "lodging establishment" does not include hospitals, nursing homes, residential retirement communities, prisons, jails, homeless shelters, boarding schools, or worker housing.

Source: <https://www.dir.ca.gov/dosh/doshreg/Hotel-Housekeeping.Discussion-Draft-for-2016-02-17.pdf>.

WCIS Definition of Lodging Establishment

Based on the definition provided by WCIS, included are the establishments with the following NAICS, SIC and class codes in WCIS data.

— NAICS 721 Accommodation*:

- NAICS 721110 Hotels (except Casino Hotels) and Motels
- NAICS 721120 Casino Hotels
- NAICS 721191 Bed and Breakfast Inns
- NAICS 721199 All other traveler accommodation
- NAICS 721310 Rooming and Boarding Houses

— SIC 7011 Hotels and Motels

— SIC 7021 Rooming and Boarding Houses

— SIC 7041 Organization Hotels and Lodging Houses, on Membership Basis

— Class code 9050 Hotels and Motels

* NAICS 721211 Recreational Vehicle (RV) Parks and Campgrounds and NAICS 721214 Recreational and Vacation Camps are excluded from the NAICS 721 Accommodation major category.

Appendix 2. DOSH and WCIS housekeeper definition

DOSH Definition of Housekeepers

“Housekeeper” means an employee who performs housekeeping tasks; this may include employees referred to as housekeepers, guestroom attendants, room cleaners, maids, and house persons.

“Housekeeping tasks” means tasks related to cleaning and maintaining hotel room accommodations, including bedrooms, bathrooms, kitchens, living rooms, and balconies. Housekeeping tasks include, but are not limited to: (1) sweeping, dusting, cleaning, scrubbing, mopping, and polishing of floors, tubs, showers, sinks, mirrors, walls, fixtures, and other surfaces; (2) making beds; (3) vacuuming; (4) loading, unloading, pushing, and pulling linen carts; (5) removing and supplying linen and other supplies in the rooms, (6) collecting and disposing of trash; and (7) moving furniture.

Source: <https://www.dir.ca.gov/dosh/doshreg/Hotel-Housekeeping.Discussion-Draft-for-2016-02-17.pdf>.

WCIS Finding for ‘Housekeepers’ in Lodging Establishments

There is no code for Hotel Housekeepers in WCIS so instead we are using a narrative occupation description to find the Housekeepers in found lodging establishments. To single out ‘Housekeepers’ we searched for injured workers with job descriptions including and excluding the keywords listed below; then manually deleted the cases which were not Hotel Housekeepers through reviewing.

Job description Such As:

'%HOUSEK%'
 '%ROOM%'
 '%RM%'
 '%MAID%'
 '%ROOMCLEANER%'
 '%ROOMSKEEPER%'

And Not Like:

'%WAREHOUSE%'
 '%INSPECTOR%'
 '%BANQUET%'
 '%BANQUEST%'
 '%BQT HOUSEMAN%'
 '%CASHIER%'
 '%CLERK%'
 '%DOORMAN%'
 '%GROOMER%'
 '%GATEHOUSE%'
 '%UNIFORM%'
 '%MINI BAR%'
 '%GOURMET%'
 '%DINING%'
 '%HOUSEBOAT%'
 '%DISHWASHER%'
 '%FOOD SERVER%'
 '%SERVICE SERVER%'
 '%BANQ%'
 '%BELLMAN%'
 '%COOK%'
 '%DISH%'
 '%GROOM%'
 '%FARM%'
 '%COOK%'
 '%KITCHEN%'
 '%TURNDOWN ROOM%'

And Not Like:

'%CAFFEE%'
 '%COOK%'
 '%INFORMATION%'
 '%SRMGR%'
 '%UNIFORM%'
 '%CONFIRMER%'
 '%DOORMEN%'
 '%FOOD STORE%'
 '%FORMULATOR%'
 '%WASHROOM%'
 '%IN ROOM%'
 '%LOCKER ROOM%'
 '%ROOM STYLIST%'
 '%ROOM TURNDOWN%'
 '%SUPV BAG ROOM%'
 '%WASHERMAN%'
 '%SUPV - STORE ROOM%'
 '%STORE ROOM SUPERVISOR%'
 '%MAID /BREAKFAST ATTE%'
 '%PHARM TECH/DRI%'
 '%PHARMACY TECH%'
 '%POKER FLOORMAN%'
 '%PRE ARRIVALS/ROOMS CONTROL%'
 '%RM SERV FOOD&BEV%'
 '%RM. CHECKER%'
 '%ROOM P.M. ENGINEER%'
 '%ROOM INSPEC%'
 '%TURN DOWN/ROOM%'

Appendix 3. MSD WCIS Case Definitions with Workers' Compensation Codes**DOSH MSD Definition**

"Musculoskeletal injury" means acute injury or cumulative trauma of the muscle, tendon, ligament, bursa, peripheral nerve, joint, bone or blood vessel.

Potential injury risks to housekeepers including but are not limited to: (1) slips, trips and falls; (2) prolonged or awkward static postures; (3) extreme reaches and repetitive reaches above shoulder height, (4) lifting or forceful whole body or hand exertions; (5) torso bending, twisting, kneeling, and squatting; (6) pushing and pulling; (7) falling and striking objects; (8) pressure points where a part of the body presses against an object or surface; (9) excessive work-rate; and (10) inadequate recovery time between housekeeping tasks.

Source: <https://www.dir.ca.gov/dosh/doshreg/Hotel-Housekeeping.Discussion-Draft-for-2016-02-17.pdf>

WCIS MSD Case Definition Using Workers' Compensation Cause of Injury, Nature of Injury and Body Part Codes

Cause of Injury

Fall, Slip Or Trip

- From Different Level (Elevation)
- From Ladder or Scaffolding
- From Liquid or Grease Spills
- On Same Level
- Slip, or Trip, Did Not Fall
- Fall, Slip or Trip, NOC
- On Stairs

Strain or Injury by

- Twisting
- Holding or Carrying
- Lifting
- Pushing or Pulling
- Reaching
- Using Tool or Machinery
- Strain or Injury By, NOC
- Welding or Throwing
- Repetitive Motion

Striking Against or Stepping On

- Object Being Lifted or Handled
- Sanding, Scraping, Cleaning Operation
- Stationary Object
- Stepping on Sharp Object
- Striking Against or Stepping On, NOC

Struck or Injured By

- Hand Tool or Machine in Use
- Object Being Lifted or Handled

Caught In, Under or Between

- Object Handled

Cumulative, NOC

Nature of Injury

Contusion

Dislocation

Fracture

Sprain or Tear

Strain or Tear

Carpal Tunnel Syndrome

All Other Cumulative Injury, NOC

Multiple Physical Injuries Only

OR

AND

Body Part

Neck

Trunk

- Multiple Trunk

- Upper Back Area

- Lower Back Area

Upper Extremities

Lower Extremities

Multiple Body Parts

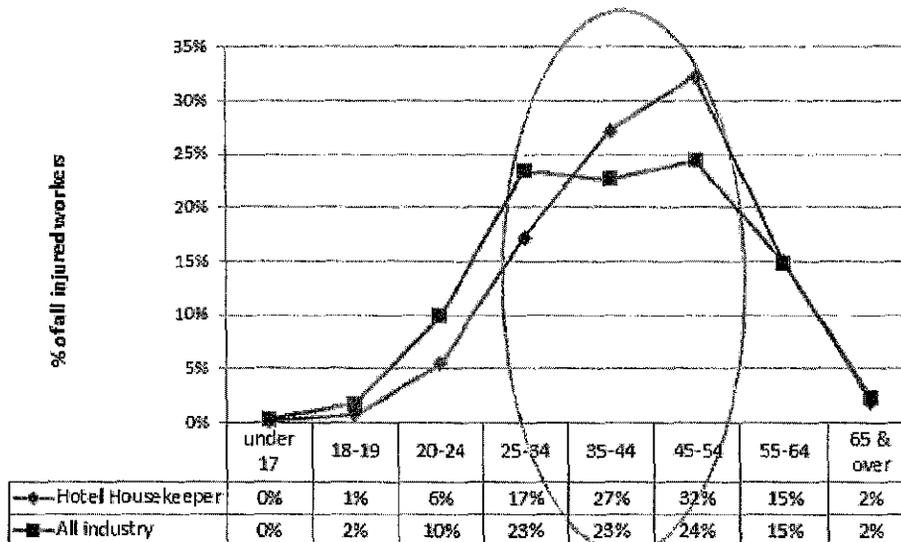
Lumbar & or Sacral Vertebrae

Body Systems and Multiple Body Systems

Whole Body

Source: <https://www.dir.ca.gov/dosh/doshreg/Hotel-Housekeeping.Discussion-Draft-for-2016-02-17.pdf>

Appendix 4. Housekeeper Age Range at Time of Injury for California, 2010-2014



Note: Injuries listed here are reported to WCIS with NAICS industry 721110, 721120, 721191, 721199, and 721310; SIC code 7011, 7021, and 7041; or class code 9050, from a search dated December 1, 2015.